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Root-Knot Nematode (*Meloidogyne spp.*)

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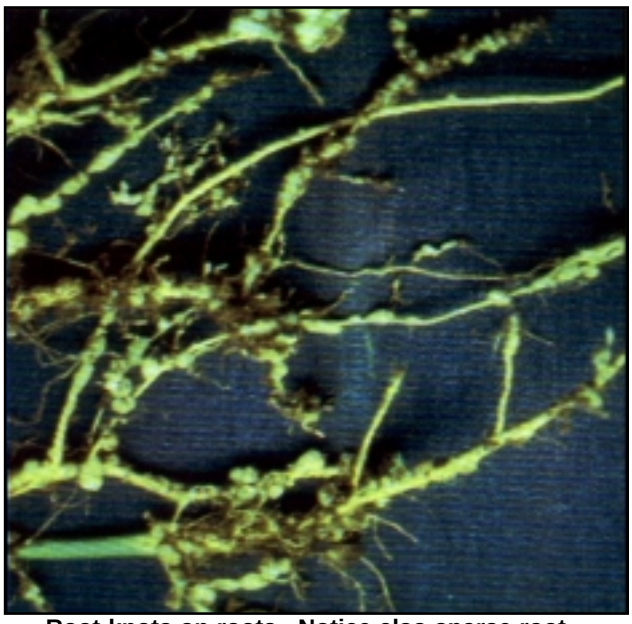
Nematodes are tiny, almost microscopic worms that attack many plants. Root-knot nematodes feed on the roots of most vegetables and some ornamental plants causing large galls or knots. The root system may become severely deformed or only exhibit a few knots, depending on the severity of the infestation and the plant's susceptibility. Production is reduced in infested plants and in severe cases root-knot can completely eliminate production.

Infested plants show no specific symptoms above ground other than a generally unhealthy appearance. Plants infested with root-knot may lose leaves prematurely and wilt during the heat of the day. Nematodes may be introduced into a field by using infested plant material or moving soil from an infested field (e.g., on farm implements and tools). Nematodes can be spread where irrigation water is returned to irrigation channels and used on other farms. Once introduced into a field, root-knot nematodes can spread within the field during cultivation and with soil water.



Root-knots on roots. Notice also sparse root development.

Control:

- Crop rotation with grasses for 2-3 years reduces the population of root-knot nematodes considerably.
- Where the climate is hot enough, reduction in the nematode population can be accomplished with certain plowing techniques by exposing nematodes in different layers of soil to the elements. Three consecutive plowings, at two-week intervals, is done during the dry season. Start at a shallow depth and plow progressively deeper.
- Use seedlings that are free of nematodes when transplanting.
- Nematode resistant cultivars are also available.
- Infested soil can be treated with nematicides.

If the use of chemicals is required or if additional information is desired, consult an Extension Agent at your local land grant institution. In Guam you may also consult the Guam Fruit and Vegetable Pesticide Guide for current recommendations and permissible uses. Seed catalogs may also tell if certain plant varieties are resistant to root-knot nematode.

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